

Claims:

This listing of claims replaces all prior versions and listings of claims in the Application:

1-33. (Canceled).

34. **(Currently Amended)** A system for cooling electronic components, comprising:

a rack structure holding a plurality of computer boards that support heat-generating computer components, the rack structure having open first and second sides permitting fluid communication across the computer boards to an exterior of the rack structure, wherein the rack structure is one of a plurality of rack structures arranged to form a pair of rows on each side of a central aisle, the plurality of computer boards accessible through at least one of the open first and second sides through the central aisle;

a plurality of air circulation fans adjacent one of the open first or second sides, wherein each of the circulation fans is located near an edge of one of the computer boards and positioned to circulate cooling air across an associated board, wherein the air circulation fans provide cooling air over the computer boards, wherein cooling air circulated over a first computer board is separate from cooling air circulated over a second computer board adjacent the first computer board;

one or more cooling coils associated with each of the plurality of boards and located near one of the first or second sides of the rack structure; and

a fan controller corresponding to each air circulation fan to control the speed of the corresponding fan according to a temperature sensed around a board corresponding to the air circulation fan.

35. **(Previously Presented)** The system of claim 34, wherein the one or more cooling coils are positioned immediately adjacent to the plurality of circulation fans.

36. **(Currently Amended)** The system of claim 34, ~~further comprising a plurality of rack structures,~~ each rack structure in the plurality of rack structures having associated air fans, cooling coils, and fan controllers, and wherein the ~~rack structures are arranged to form a pair of rows~~ is arranged on each side of ~~[[a]] the central aisle, the central aisle disposed lengthwise in [[of]] a container that houses the plurality of rack structures, the plurality of rack structures accessible from the aisle, with~~ the cooling coils located on sides of the rack structures away from the aisle and near outside walls of the container.

37. **(Previously Presented)** The system of claim 36, further comprising a cooling module located outside the container and fluidly connected to the cooling coils at one end of the container.

38. **(Previously Presented)** The system of claim 34, further comprising a separate cooling coil for each computer in a rack of computers.

39. **(Previously Presented)** The system of claim 38, wherein the computer boards are mounted horizontally on shelves of the rack structure, and each of the air circulation fans is matched to a space between adjacent boards.

40. **(Canceled).**

41. **(Previously Presented)** The system of claim 34, wherein the one or more cooling coils include coolant conduits having an external member and an inner baffle defining an annular channel therebetween and through which a cooling liquid flows.

42. **(Previously Presented)** The system of claim 34, wherein the cooling for each computer board is individually controlled by individually and separately controlling a fan speed, and thus air flow rate, for each computer board.

43. **(Currently Amended)** A system for cooling electronic components, comprising:

first and second rows of computer racks arranged on each side of a central aisle, each rack including:

a frame structure defining a plurality of spaces and an open front and back sides, ~~wherein the open front side of each rack is accessible from the aisle;~~

a plurality of computer boards holding computing components and mounted in the frame structure, wherein the plurality of computer boards are accessible through at least one of the open front and back sides of the frame structure through the aisle;

a plurality of fans circulating air over the plurality of computer boards, each fan associated with a computer board and a temperature sensor near the computer board;

one or more cooling coils arranged to cool air from the plurality of fans, wherein the cooled air is circulated over a first computer board to an exterior of the frame structure separately from the cooled air circulated over a second computer board adjacent the first computer board; and

a plurality of fan controllers corresponding to the plurality of fans and programmed to control the speed of each fan according at least to a temperature sensed by each fan's associated temperature sensor.

44. **(Previously Presented)** The system of claim 43, wherein the open back side of each frame structure is adjacent an exterior wall of a container that holds the rows of computer racks and the one or more cooling coils located between the open back side and the exterior wall of the container.

45. **(Previously Presented)** The system of claim 44, wherein the racks extend substantially the length of the container.

46. (Previously Presented) The system of claim 43, further comprising a cooling module located outside the container and providing a cooling liquid to the plurality of cooling coils.

47. (Previously Presented) The system of claim 43, wherein the cooling coils include coolant conduits having an external member and an inner baffle defining an annular channel therebetween and through which a cooling liquid flows.

48. (Previously Presented) The system of claim 43, wherein the cooling for each computer board is individually controlled by individually and separately controlling a fan speed, and thus air flow rate, for each computer board.

49. **(Currently Amended)** A method for cooling electronic components, comprising:

providing a plurality of rack structure structures along opposed sides of a central aisle, each rack structure having an open first side and an open second side, wherein the aisle is located adjacent one of the first and second open sides of the rack structures;

providing a plurality of computer boards in ~~[[the]]~~ each rack structure in a manner to create open spaces between each of the next adjacent computer boards, the plurality of computer boards accessible through at least one of the open first and second sides of each rack structure through the aisle;

circulating air across the computer boards and through cooling coils adjacent the second side of ~~[[the]]~~ each rack structure to an exterior of ~~[[the]]~~ each rack structure using fans adjacent the second side of ~~[[the]]~~ each rack structure, wherein each fan corresponds to a computer board, the circulated air across a first computer board separate from the circulated air across a second computer board adjacent the first computer board; and

controlling a speed of each fan using a sensed temperature around its corresponding board.

50. **(Currently Amended)** The method of claim 49, wherein providing a plurality of rack structures along opposed sides of a central aisle comprises providing a plurality of rack structures ~~further comprising providing the rack structure with other corresponding rack structures~~ along opposed sides of a central aisle in a container, ~~wherein the aisle is located adjacent the first open side of the rack structures, the rack structures accessible from the aisle, and the open second sides of the plurality of rack structures~~ [[are]] located adjacent exterior walls of the container.

51. **(Previously Presented)** The method of claim 50, further comprising:
providing a cooling module located outside the container; and
fluidly connecting the cooling module to the cooling coils at one end of the container.

52. (Previously Presented) The method of claim 49, further comprising:
mounting the plurality of computer boards horizontally on shelves of the rack structure;
and
matching each of the fans to a space between adjacent computer boards.

53. (Previously Presented) The method of claim 49, further comprising:
providing at least one valve in fluid communication with the cooling coils;
modulating a cooling liquid to the cooling coils through the valve; and
controlling the valve according to at least one of a temperature and a pressure of the
cooling liquid.

54. (Previously Presented) The method of claim 53, wherein providing at least
one valve in fluid communication with the cooling coils comprises providing a cooling liquid to
a coolant conduit having an external member and an inner baffle defining an annular channel
therebetween and through which the cooling liquid flows, at least one of the cooling coils
comprising the coolant conduit.

55. (Previously Presented) The method of claim 49, wherein controlling a
speed of each fan using a sensed temperature around its corresponding board comprises
individually and separately controlling a speed of each fan using a sensed temperature around its
corresponding board.

56. (Previously Presented) The system of claim 34, further comprising:
a valve in fluid communication with the cooling coil for modulating a cooling liquid to
the cooling coil; and
a valve controller in communication with the fan controller, the valve controlled by the
valve controller according to at least one of a temperature and a pressure of the cooling liquid.